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EXAMINER
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CLAYTOR, DEIRDRE RENEE

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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* ANDREA DEMETRIUS BOWENS-JONES  
and ANTOINETTE LYNN ALLEN

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Appeal 2008-2019  
Application 10/719,755  
Technology Center 1600

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DECIDED: March 29, 2008

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Before TONI R. SCHEINER, DONALD E. ADAMS, and JEFFREY N.  
FREDMAN, *Administrative Patent Judges*.

SCHEINER, *Administrative Patent Judge*.

**DECISION ON APPEAL**

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 1-16 as obvious over the prior art. We have jurisdiction under 35 U.S.C. § 6(b). We affirm the rejection with respect to claims 1-7, 9-11, and 13-16, but designate the affirmance a new ground of rejection. We reverse the rejection with respect to claims 8 and 12.

## STATEMENT OF THE CASE

“The present invention provides an antiperspirant . . . that allow[s] for retention of actives on the skin in order to alleviate or prevent the flow of perspiration. These compositions comprise a skin-adhering system comprising skin-adhering polymers and one or more volatile solvents.”  
(Spec. 1: 29-32.)

Claims 1, 8, and 12 are representative of the claimed subject matter and read as follows:

1. Anhydrous, antiperspirant compositions comprising:
  - a. a skin-adhering system comprising:
    - i) a skin-adhering polymer;
    - ii) one or more volatile solvents;
  - b. antiperspirant active;
  - c. thickening agent; and
  - d. an anhydrous carrierin an amount sufficient to provide antiperspirant efficacy.
8. The composition of claim 1 wherein the ratio of the weight percentage of polymer to the weight percentage of thickening agent is from about 2:1 to about 0.5:1.
12. The composition of claim 1 wherein the thickening agent is selected from the group consisting of organic solids, silicone solids, gellants, inorganic particulates, and mixtures thereof.

## ISSUE ON APPEAL

The Examiner rejected claims 1-16 under 35 U.S.C. § 103(a) as unpatentable over Schraer (U.S. Patent 6,274,127 B1, August 14, 2001) in view of Swaile (U.S. Patent 6,149,897, November 21, 2000).

According to the Examiner, Schraer describes an anhydrous antiperspirant comprising all the elements of the claimed composition,

except for a volatile solvent. In particular, the Examiner contends that Schraer's composition contains "water-reactive monomers (meeting the limitation of skin-adhering polymer) in addition to thickening or suspending agents such as C18-36 acid triglycerides. Therefore, compositions comprising both a polymer that adheres to the skin and a thickening agent are taught by Schraer" (Ans. 7).

With respect to the volatile solvent required by the claims, the Examiner relies on Swaile's description of another anhydrous antiperspirant "where a possible anhydrous solvent is ethanol" (Ans. 4). The Examiner contends that "it would have been obvious to one having ordinary skill in the art . . . to combine the ingredients of Schraer et al. and add ethanol from the teachings of Swaile to provide improved dry feel application, antiperspirant efficacy and stability of the dissolved active" (Ans. 5).

Appellants contend that the combined disclosures of Schraer and Swaile fail to meet each and every limitation of the claimed invention (Appeal Br. 3), because Schraer's water-reactive monomers are not skin-adhering polymers (Appeal Br. 3-4). Thus, Schraer does not describe "a composition having both a skin-adhering polymer and a separate thickening agent" (Appeal Br. 3), and "Swaile does not remedy the shortcomings of Schraer" (Appeal Br. 5).

The determinative issue raised by this appeal is whether Schraer's anhydrous antiperspirant composition contains a skin-adhering polymer and a thickening agent, as required by the claims.

#### FINDINGS OF FACT<sup>1</sup>

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<sup>1</sup> Abbreviated "FF".

*The Invention of Claim 1*

1. Claim 1 is directed to an anhydrous, antiperspirant composition comprising a skin-adhering polymer; a volatile solvent; an antiperspirant active; a thickening agent; and an anhydrous carrier.
2. “The skin-adhering polymer in combination with the volatile solvent form[s] a system that works to retain the antiperspirant actives on the skin” (Spec. 3: 7-9).
3. “The term ‘skin-adhering polymer’ . . . refers to those polymers that when applied to skin form flexible substantive films . . . [and] function as substantivity aids to trap or hold the active onto the skin for a time sufficient to provide the desired efficacy benefit” (Spec. 2: 31-34). Skin-adhering polymers “include, but are not limited to, acrylate polymers/co-polymers and silicone polymers/co-polymers. Examples of acrylate co-polymers include, but are not limited to, various combinations of acrylate and/or methacrylate monomers, including acrylic-ester and acrylic-acid monomers. Examples of silicone-modified co-polymers include, but are not limited to, silicone-acrylate copolymers, silicone-urethane copolymers, silicone-maleic anhydride copolymers, silicone resin copolymers, and mixtures thereof” (Spec. 3: 24-30).
4. “The term ‘volatile solvent’ . . . refers to solvents that exhibit vapor pressures of at least about 0.10 . . . [and] preferably no more than about 100.00 (mmHg) at about 20°C” (Spec. 3: 3-5). “The function of the volatile solvent as part of the skin-adhering system is to aid in rapid film formation by evaporating quickly on skin to leave behind the polymer film, active, and other components” (Spec. 4: 30-32). “Volatile solvents . . . include, but are

not limited to, alcohols, silicone fluids, fluorinated solvents and mixtures thereof” (Spec. 4: 35 to 5: 1).

5. “The term ‘thickening agent’ includes any material known or otherwise effective in providing suspending, gelling, viscosifying, solidifying or thickening properties to the composition or which otherwise provide structure to the final product form. These thickening agents include gelling agents, and polymeric or nonpolymeric or inorganic thickening or viscosifying agents. The thickening agents will most typically include organic solids, silicone solids, crystalline or other gellants, inorganic particulates such as clays or silicas, or combinations thereof” (Spec. 6: 14-19).

*Schraer*

6. Schraer describes anhydrous antiperspirant compositions “wherein the *applied* composition on the skin is in the form of discontinuous polymer-containing films positioned over the sweat ducts in the skin, and/or otherwise forming plugs within the sweat ducts, wherein the *resulting* polymer-containing films/plugs are derived from water-reactive monomers that react with sweat or other aqueous liquid at the opening of the sweat ducts *after* application, to thereby polymerize and form discontinuous polymer-containing films over the sweat ducts and/or polymer-containing plugs within those sweat ducts” (Schraer, col. 13, ll. 21-31 (emphasis added)).

7. Schraer’s composition contains an anhydrous carrier, which is “preferably substantially free of any substituent or material that would readily react with and trigger in situ polymerization of the water-reactive

monomers” (Schraer, col. 4, ll. 63-66). The anhydrous carrier “[p]referably comprises a volatile carrier, more preferably a volatile silicone” (Schraer, col. 5, ll. 25-26).

8. “[T]he water-reactive monomers do not as readily react and polymerize on the skin until after the applied anhydrous carrier evaporates from the topically applied composition” (Schraer, col. 5, ll. 32-36).

9. Schraer’s “antiperspirant compositions . . . may further comprise a suspending or thickening agent to help provide the composition with the desired viscosity, rheology, texture and/or product hardness . . . These suspending or thickening agents include gelling agents, and polymeric or nonpolymeric or inorganic thickening or viscosifying agents” (Schraer, col. 9, ll. 12-25). “Preferred suspending or thickening agents include, for example, polycyanoacrylates, polylactic acid, polyglycolic acid . . . copolymers of alkylacrylate and vinyl acetate, polyalkyl methacrylates, copolymers of alkyl methacrylates and butadiene, silicone copolyols, silicone elastomers, copolymers of acrylates and siloxanes and combinations thereof” (Schraer, col. 9, ll. 36-45).

10. Table 1 of Schraer describes an anhydrous antiperspirant composition containing acrylatevinylacetate (Example 4 of Schraer’s Table 1).

## DISCUSSION

As discussed above, the determinative issue raised by this appeal is whether Schraer's anhydrous antiperspirant composition contains a skin-adhering polymer and a thickening agent.

According to the Examiner, Schraer's composition contains "water-reactive monomers (meeting the limitation of skin-adhering polymer) in addition to thickening or suspending agents such as C18-36 acid triglycerides. Therefore, compositions comprising both a polymer that adheres to the skin and a thickening agent are taught by Schraer" (Ans. 7). In particular, the Examiner contends that "the water-reactive monomers polymerize on the skin and according to Schraer . . . may polymerize during or after application" (Ans. 6).

Appellants argue that Schraer's water-reactive monomers do not "polymerize into a polymer film until activated by sweat or water" (Appeal Br. 3), "[t]hus, these water-reactive materials within the [anhydrous] composition prior to application to the skin, and upon application to the skin but prior to being triggered by sweat or other aqueous liquid, are not in the form of a skin-adhering polymer" (Appeal Br. 4).

Appellants have the better argument. The claims require an anhydrous composition (FF 1). The fact that Schraer's monomers form a polymer film upon application to the skin and activation by water or sweat is irrelevant, because Schraer's composition is no longer anhydrous once it is activated (FF 6, 7, 8). The water-reactive monomers remain unpolymerized, as long as the composition remains anhydrous (FF 6, 7, 8). Thus, we agree with Appellants that Schraer's water-reactive monomers, in Schraer's anhydrous antiperspirant composition, are not skin-adhering polymers.



However, we note that Schraer's anhydrous composition can contain the same kinds of acrylate copolymers and silicone copolymers (Schraer, col. 9, ll. 36-45; Table 1 (Example 4); FF 9, 10) described as skin-adhering polymers in the present Specification (Spec. 3: 24-30; FF 3), although Schraer lists them as preferred thickening agents, along with essentially all the other thickening agents listed in the present Specification (Schraer, col. 9, ll. 11 to col. 11, ll. 38; FF 9).

Appellants do not contend that Schraer's polymeric thickening agents differ from, or cannot function as, the skin-adhering polymers required by the claims. Rather, Appellants argue that it is improper to rely on a single optional component "to read on two separate and distinct features - a skin adhering polymer and a thickening agent - that are recited in the rejected claims" (Appeal Br. 5).

Nevertheless, Appellants cite no authority, and we know of none, that supports the proposition that one component of a composition cannot perform two functions simultaneously, in the absence of a requirement that the functions are performed by different substances. We find no such requirement in claims 1-7, 9-11, and 13-16. In any case, as discussed above, Schraer teaches that combinations of different polymeric thickening agents can be used in the compositions (Schraer, col. 9, l. 45; FF 9).

Based on our finding that Schraer describes anhydrous antiperspirant compositions containing the same kinds of polymeric thickening agents described as skin-adhering polymers in the present Specification, we find that the combined disclosures of Schraer and Swaile meet all the limitations of the invention of claims 1-7, 9-11, and 13-16.

Accordingly, the rejection is affirmed with respect to claims 1-7, 9-11, and 13-16. Because our reasoning differs from that relied on by the Examiner, we designate the affirmance a new ground of rejection under 37 C.F.R. § 41.50(b).

Claims 8 and 12, however, stand on a different footing. Claim 8 specifies that the skin-adhering polymers and the thickening agent are present in a specified ratio. Claim 12 requires that the thickening agent is selected from the group consisting of organic solids, silicone solids, gellants, or inorganic particulates. Therefore, claim 8 affirmatively requires a separate skin-adhering polymer and a thickening agent, while claim 12 requires a thickening agent that is not one of the thickening agents that simultaneously functions as a skin-adhering polymer.

Thus, we agree with Appellants that the combined disclosures of Schraer and Swaile fail to meet each and every limitation of claims 8 and 12, and the rejection is reversed with respect to these claims.

#### SUMMARY

The rejection of the claims under 35 U.S.C. § 103(a) as unpatentable over Schraer and Swaile is affirmed with respect to claims 1-7, 9-11, and 13-16, but designated a new ground of rejection. The rejection is reversed with respect to claims 8 and 12.

#### TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph

shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

REVERSED-IN-PART, 37 C.F.R. § 41.50(b)

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